

35-13-20W

*Handwritten initials/signature*

LEAVELL RESOURCES CO. *N*

ENGEL #5

75' SW of C SE NE  
35 T13S R20W  
Ellis County, Kansas

JUL 27 1987

GEOLOGICAL REPORT

KANSAS GEOLOGICAL SURVEY  
WICHITA BRANCH

By  
Randall Kilian  
P.O. Box 26  
Hays, Kansas 67601-0026



RECEIVED  
STATE GEOLOGICAL COMMISSION

July 16, 1987

JUL 23 1987

GUNDERMAN BUILDING  
Wichita, Kansas

35-13-20W

Leavell Resources Co.  
P.O. Box 241  
Robinson, Ill. 62454

RE: ENGEL #5  
75' SW of C SE NE  
Sec. 35 T13S R20W  
Ellis County, Kansas

Dear Sirs:

The Engel #5 well was drilled with rotary tools commencing July 9, 1987, to a rotary total depth of 3910 (-1687), and drilling was completed July 16, 1987. Production casing was set and cemented to further test this well. The following is a Geological Report for this well:

OPERATOR: LEAVELL RESOURCES CO.

CONTRACTOR: Western Kansas Drilling Rig #1

ELEVATION: 2223 K.B. 2218 G.L.

GEOLOGICAL SUPERVISION: 3200' to R.T.D.

DRILLING TIME: 3100' to R.T.D.

SAMPLES: 3200' to R.T.D.

DRILL STEM TESTS: None

ELECTRIC LOGS: R.A. Guard, DCN. Great Guns

PIPE RECORD: 8 5/8 @ 254' w/ 150 Sxs.  
5 1/2 @ 3909 w/

FORMATION DATA: (Electric Log Tops)

<u>FORMATION</u>	<u>DEPTH</u>	<u>SUBSEA DATUM</u>
Anhydrite	1520-61	+ 703-+ 662
Topeka	3220	- 997
Heebner Shale	3466	-1243
Toronto	3488	-1265
Lansing	3509	-1286
Base Kansas City	3756	-1533
Marmaton	3798	-1575
Arbuckle	3846	-1623
R.T.D.	3910	-1687

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CONDUCTED BY: [unclear]  
Western Kansas

35-13-20W

STRUCTURAL COMPARISONS

<u>FORMATIONS</u>	<u>Leavell Engel #5</u>	<u>Leavell Engel #4</u>	<u>Texaco Engel #1</u>
	75'SW SE NE	150'NE SE NE	C SE NE 35
Heebner	-1246	-1246	-1247
Lansing	-1286	-1289	-1289
Base Kc.	-1533	-1536	-1537
Base Marmaton	-1599	-1600	-1599
Arbuckle	-1623	-1676	-1619
R.T.D.	-1687	-1693	-1644

ZONES OF INTEREST

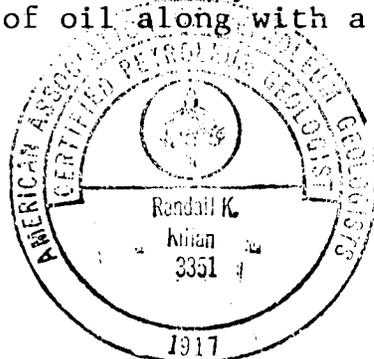
<u>FORMATION</u>	<u>DEPTH</u>	<u>DESCRIPTION</u>
Lansing Kc. 'J'	3692-98	Limestone; buff, fossiliferous, oolitic packstone, with most particals absent, slightly dolomitic, with good oomoldic porosity, oil stained to saturated, good odor, good show of free oil. Calc. 21% $\phi$ , 28% S.W.S.
Arbuckle	3846-56	Dolomite; buff, fine crystalline, with poor to fair intercrystalline porosity, oil saturated, good odor, show of free oil. Calc. 9-13% $\phi$ , 33-60% S.W.S.
Arbuckle	3856-90	Dolomite; light gray, medium to coarse crystalline, with good intercrystalline and vuggy porosity, with some chert, oil saturated, good odor, good show of free oil. Calc. 8-25% $\phi$ , 45-72% S.W.S.

Note; Please refer to the Geologist's Drilling Time and Sample Log for any additional information.

SUMMARY & RECOMMENDATIONS

The Engel #5 well ran about flat to the Texaco Engel #1 well 75 feet to the northeast. The Lansing Kc. 'J' zone looks good in samples and on the electric log. This zone should be tested before abandoning the well. If this zone is fractured, it could produce much oil. If it is not fractured, it will have low permeability and produce only a small amount of oil. The Arbuckle, which is the main pay zone and only 75 feet from production, should have economical quantities of oil along with a high percentage of water.

Respectfully,  
*Randall Kilian*  
Randall Kilian  
P.O. Box 26  
Hays, Kansas 67601



STATE OF KANSAS  
JUL 23 1987